



CONSUMER PRODUCT SAFETY COMMISSION

14 CFR Part 1421

[Docket No. CPSC-2021-0014]

Notice of Availability and Request for Comment: “Study of Debris Penetration of Recreational Off-Highway Vehicle (ROV) Proof-of-Concept (POC) Floorboard Guards”

AGENCY: Consumer Product Safety Commission.

ACTION: Proposed rule; availability of supplemental information.

SUMMARY: The U.S. Consumer Product Safety Commission (Commission or CPSC) is announcing the availability of, and seeking comment on, a report from SEA, Ltd. (SEA), “Study of Debris Penetration of Recreational Off-Highway Vehicle (ROV) Proof-of-Concept (POC) Floorboard Guards” (SEA Technical Report). This report is related to CPSC’s notice of proposed rulemaking (NPR) regarding off-highway vehicle debris penetration hazards. CPSC contracted with SEA to perform debris penetration tests on POC floorboard guards per the test methods described in the NPR. The SEA Technical Report also evaluates an alternative test method for debris penetration that is proposed in two draft voluntary standards. The SEA testing evaluates the effectiveness of the test methods in addressing the debris penetration hazard and the feasibility of the proposed requirements in the NPR.

DATES: Comments must be received by [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Submit comments, identified by Docket No. CPSC-2021-0014, by any of the following methods:

Electronic Submissions: Submit electronic comments to the Federal eRulemaking Portal at: www.regulations.gov. Follow the instructions for submitting comments. CPSC typically does not accept comments submitted by electronic mail (e-mail), except as described

below. CPSC encourages you to submit electronic comments by using the Federal eRulemaking Portal.

Mail/hand delivery/courier/confidential Written Submissions: Submit comments by mail, hand delivery, or courier to: Office of the Secretary, Consumer Product Safety Commission, 4330 East West Highway, Bethesda, MD 20814; telephone: (301) 504-7479. If you wish to submit confidential business information, trade secret information, or other sensitive or protected information that you do not want to be available to the public, you may submit such comments by mail, hand delivery, or courier, or you may email them to: cpsc-os@cpsc.gov.

Instructions: All submissions must include the agency name and docket number. CPSC may post all comments without change, including any personal identifiers, contact information, or other personal information provided, to www.regulations.gov. Do not submit through this website: confidential business information, trade secret information, or other sensitive or protected information that you do not want to be available to the public. If you wish to submit such information, please submit it according to the instructions for mail/hand delivery/courier/confidential written submissions.

Docket: For access to the docket to read background documents or comments received, go to: www.regulations.gov, and insert the docket number, CPSC-2021-0014, into the “Search” box, and follow the prompts.

FOR FURTHER INFORMATION CONTACT: Han Lim, Directorate for Engineering Sciences, U.S. Consumer Product Safety Commission, 5 Research Place, Rockville, MD 20850; telephone: (301) 987-2327; email: hlim@cpsc.gov.

SUPPLEMENTARY INFORMATION:

CPSC is engaged in a rulemaking to address debris penetration hazards associated with ROVs and Utility Task/Terrain Vehicles (UTVs). On July 21, 2022, the Commission published in the *Federal Register* an NPR regarding a Safety Standard for Debris Penetration Hazards, 87 FR 43688.

The NPR proposed test methods to address debris penetration hazards associated with ROVs and UTVs. The Outdoor Power Equipment Institute (OPEI) and Recreational Off-Highway Vehicle Association (ROHVA), two industry groups that represent ROV and UTV manufacturers in the United States, have proposed a different debris penetration test method in two draft voluntary standards.¹ These two draft standards, ANSI/OPEI B71.9-202x and ANSI/ROHVA-1-202x, include a drop test with an impact energy of 355 joules (the “355 J drop test”) that OPEI and ROHVA assert will address the debris penetration hazard.² OPEI and ROHVA proposed this test method as an alternative to the NPR test methods. OPEI and ROHVA assert that the energy level used in the 355 J drop test method is based on the OPEI and ROHVA members’ warranty claim and incident data.

CPSC contracted with SEA to perform debris penetration tests on POC floorboard guards per the test methods described in the NPR and the 355 J drop test method in the two draft voluntary standards. The Technical Report, “Study of Debris Penetration of Recreational Off-highway Vehicle (ROV) Proof-of-Concept (POC) Floorboard Guards,” completed by SEA in October 2022, provides discussion and test results from testing to the proposed requirements in the NPR, and to the 355 J drop test method proposed in the two draft voluntary standards. SEA conducted this testing to evaluate the feasibility and effectiveness of POC floorboard guards that conform to the proposed requirements in the NPR, as well as to assess the NPR and 355 J drop test methods.

SEA conducted debris penetration tests using full-scale, autonomously driven ROVs. SEA also tested a simulated ROV sled system it previously developed,³ to evaluate POC

¹ OPEI balloted the proposed test on August 3, 2022. ROHVA balloted the proposed test on September 8, 2022.

² OPEI included the draft proposed drop test procedure in a comment to the ROV/UTV Debris Penetration NPR (pages 29 to 32 in the PDF attachment): <https://www.regulations.gov/comment/CPSC-2021-0014-0191>. The drop test method involves a 2-inch diameter wood penetrator dowel that strikes an ROV/UTV floorboard surface when an 80-pound weight is dropped onto the dowel from 1 meter. The drop weight is dropped in a guided path using a plastic pipe or other means to allow for vertical free fall.

³ For background information, the following 2021 SEA report describes the development of the autonomous and sled test methods and debris penetration testing of commercially available aftermarket floorboard guards: <https://www.cpsc.gov/content/Study-of-Debris-Penetration-of-Recreational-Off-Highway-Vehicle-ROV-Floorboards>.

floorboard guards' strength and their ability to reduce the debris penetration hazard. Both the sled tests and autonomous ROV were used to simulate an ROV colliding with an embedded tree branch (represented by a wooden dowel).

The sled tests were conducted in accordance with the proposed requirements in the NPR. Specifically, a simulated vehicle was propelled in a straight-line path towards 2-inch and 3-inch diameter wooden dowels at 10, 12, and 14 mph speeds. The report describes how floorboard guards can be designed to prevent debris penetration at 10 mph, as proposed in the NPR. All tests that had POC aluminum floorboard guards that were at least 0.125 inches thick did not have debris penetrations. These POC floorboard guards are thinner than an aftermarket floorboard guard that passed a 10 mph test during the 2021 SEA study, which was 0.170 inch thick. Test results also showed that POC floorboard guards capable of resisting debris penetration at 10 mph were additionally capable of resisting debris penetration at speeds greater than 10 mph. These test results appear to confirm the feasibility of designing floorboard guards that effectively reduce the risk to consumers of debris penetration hazards.

The SEA Technical Report also contains results of sled tests evaluating a commercially available, model year 2022 plastic floorboard that OPEI and ROHVA members indicated conforms to the draft 355 J drop test method. The SEA report compares the impact results at the 355 J energy level per the NPR test condition of a fully loaded vehicle traveling at 10 mph, which is approximately a 10,000 J energy level. The sled speed found to produce an impact energy level equivalent to the 355 J test condition is approximately 2.2 mph. Although no debris penetration of the plastic floorboard occurred at the 2.2 mph test condition, debris penetration did occur at the NPR's 10 mph test condition, as well as at a 6 mph test condition. The 10 mph speed is representative of incidents reviewed by CPSC and SEA staff, and it is reasonable to assume that drivers will operate ROVs and UTVs at these speeds in wooded areas where debris is likely. Thus, the test results indicate that the OPEI/ROHVA proposed 355 J energy drop test method

draft requirement does not adequately prevent debris penetration at 10 mph and poses a risk of debris penetration that could cause serious injury or death to ROV and UTV occupants.

The Commission seeks public comment on the SEA Technical Report. The report is available on CPSC's website at: <https://www.cpsc.gov/content/Study-of-Debris-Penetration-of-Recreational-Off-highway-Vehicle-ROV-Proof-of-Concept-POC-Floorboard-Guards>.

Comments must be received by **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

Alberta E. Mills, Secretary
Consumer Product Safety Commission
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